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       22mar11 13:41:29 User208760 Session D3256.2
            $0.00    0.115 DialUnits File410
     $0.00  Estimated cost File410
     $0.03  TELNET
     $0.03  Estimated cost this search
     $0.65  Estimated total session cost   0.271 DialUnits

SYSTEM:OS  - DIALOG OneSearch
  File   5:Biosis Previews(R) 1926-2011/Mar W2
         (c) 2011 The Thomson Corporation
  File  73:EMBASE 1974-2011/Mar 22
         (c) 2011 Elsevier B.V.
*File  73: The 2011 Thesaurus has been installed with UD20110407.
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         (c) format only 2011 Dialog
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thesaurus.
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      Set  Items  Description
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? e au=deisseroth albert ?

Ref   Items  Index-term
E1        2  AU=DEISSEROTH AB
E2       61  AU=DEISSEROTH ALBERT
E3        0 *AU=DEISSEROTH ALBERT ?
E4      103  AU=DEISSEROTH ALBERT B
E5       38  AU=DEISSEROTH K
E6       83  AU=DEISSEROTH K.
E7      140  AU=DEISSEROTH KARL
E8        1  AU=DEISSEROTH WENDY
E9       14  AU=DEISSEROTH, A.
E10       6  AU=DEISSEROTH, A. B.
E11       1  AU=DEISSEROTH, AL
E12      67  AU=DEISSEROTH, ALBERT

          Enter P or PAGE for more
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Ref   Items  Index-term
E13       1  AU=DEISSEROTH, ALBERT A.
E14      67  AU=DEISSEROTH, ALBERT B.
E15       9  AU=DEISSEROTH, ALBERT B. (ED)
E16       1  AU=DEISSEROTH, ALBERT P.
E17       2  AU=DEISSEROTH, K.
E18      62  AU=DEISSEROTH, KARL
E19       1  AU=DEISSEROTH, WENDY
E20       1  AU=DEISSEROTHL K
E21       2  AU=DEISSERROTH A B
E22       1  AU=DEISSERTOTH ALBERT
E23       3  AU=DEISSLER A
E24       3  AU=DEISSLER A.

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             61  AU=DEISSEROTH ALBERT
              0  AU=DEISSEROTH ALBERT ?
            103  AU=DEISSEROTH ALBERT B
             38  AU=DEISSEROTH K
             83  AU=DEISSEROTH K.
            140  AU=DEISSEROTH KARL
              1  AU=DEISSEROTH WENDY
             14  AU=DEISSEROTH, A.
              6  AU=DEISSEROTH, A. B.
              1  AU=DEISSEROTH, AL
             67  AU=DEISSEROTH, ALBERT
              1  AU=DEISSEROTH, ALBERT A.
             67  AU=DEISSEROTH, ALBERT B.
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              1  AU=DEISSEROTH, ALBERT P.
      S1     594  E1-E16
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Ref   Items  Index-term
E1        3  AU=ZHANG LIXIAO
E2      317  AU=ZHANG LIXIN
E3        0 *AU=ZHANG LIXIN ?
E4        2  AU=ZHANG LIXIN LILLY
E5        1  AU=ZHANG LIXIN ZHU LIPING
E6       10  AU=ZHANG LIXING
E7        1  AU=ZHANG LIXING KAN GUANQING
E8        5  AU=ZHANG LIXIONG
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E12       4  AU=ZHANG LIYA

          Enter P or PAGE for more
? s e2-e11
             317  AU=ZHANG LIXIN
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               1  AU=ZHANG LIXING KAN GUANQING
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      S2     376  E2-E11
?  s (s1 or s2) and (cd40L or cd40(w)ligand or cd154)(20n)(vector)
             594  S1
             376  S2
           10900  CD40L
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          694162  LIGAND
           21056  CD40(W)LIGAND
            4839  CD154
          529270  VECTOR
             454  ((CD40L OR CD40(W)LIGAND) OR CD154)(20N)VECTOR
      S3      16  (S1 OR S2) AND (CD40L OR CD40(W)LIGAND OR
                  CD154)(20N)(VECTOR)
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      S4      13  RD S3  (unique items)
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4/3/1 (Item 1 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0021275602 BIOSIS NO.: 200900617039
Use of CD40L immunoconjugates to overcome the defective immune response to vaccines for infections and cancer in the aged
AUTHOR: Tang Yu Cheng; Thoman Marilyn; Linton Phyllis-Jean; Deisseroth Albert (Reprint)
AUTHOR ADDRESS: US FDA, Off Oncol Drug Prod, 10903 New Hampshire Ave,Bldg 22,Room 6378, Silver Spring, MD 20993 USA**USA
AUTHOR E-MAIL ADDRESS: albert.deisseroth@yahoo.com
JOURNAL: Cancer Immunology Immunotherapy 58 (12): p1949-1957 DEC 2009 2009
ITEM IDENTIFIER: doi:10.1007/s00262-009-0718-3
ISSN: 0340-7004
DOCUMENT TYPE: Article; Literature Review
RECORD TYPE: Abstract
LANGUAGE: English

4/3/2 (Item 2 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0020919266 BIOSIS NO.: 200900259600
Vector Prime-Protein Boost Vaccine induces 20 Fold Decrease in the Levels of CD44(+)CD24(-/Low) Cancer Stem Cells in Epithelial Neoplasms
AUTHOR: Tang Yucheng (Reprint); Akbulut Hakan; Maynard Jonathan; Li Pingchaun; Deisseroth Albert B
AUTHOR ADDRESS: Sidney Kimmel Canc Ctr, San Diego, CA USA**USA
JOURNAL: Blood 112 (11): p1000 NOV 16 2008 2008
CONFERENCE/MEETING: 50th Annual Meeting of the American-Society-of-Hematology San Francisco, CA, USA December 06 -09, 2008; 20081206
SPONSOR: Amer Soc Hematol
ISSN: 0006-4971
DOCUMENT TYPE: Meeting; Meeting Poster
RECORD TYPE: Abstract
LANGUAGE: English

4/3/3 (Item 3 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0020916731 BIOSIS NO.: 200900257065
TAA/ecdCD40L VPP Vaccination Induces Robust Adaptive Immune Response Even in Individuals with Post Transplantation Lymphopenia
AUTHOR: Tang Yucheng (Reprint); Park Yeon Hee; Maynard Jonathan; Li Pingchuan; Akbulut Hakan; Petersen Line; Deisseroth Albert B
AUTHOR ADDRESS: Sidney Kimmel Canc Ctr, San Diego, CA USA**USA
JOURNAL: Blood 112 (11): p141-142 NOV 16 2008 2008
CONFERENCE/MEETING: 50th Annual Meeting of the American-Society-of-Hematology San Francisco, CA, USA December 06 -09, 2008; 20081206
SPONSOR: Amer Soc Hematol
ISSN: 0006-4971
DOCUMENT TYPE: Meeting; Meeting Abstract
RECORD TYPE: Abstract
LANGUAGE: English

4/3/4 (Item 4 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

18792546 BIOSIS NO.: 200600137941
Ad-sig-TAA/CD40L vector prime-TAA/CD40L protein boost vaccine for epithelial neoplasms
AUTHOR: Tang Yucheng (Reprint); Maynard Jonathan; Linton Phyllis-Jean; Zhang Wei-Wei; Fang Xiang-Ming; Deisseroth Albert
AUTHOR ADDRESS: Sidney Kimmel Canc Ctr, San Diego, CA USA**USA
JOURNAL: Journal of Immunotherapy 28 (6): p638 NOV-DEC 2005 2005
CONFERENCE/MEETING: 20th Annual Scientific Meeting of the International-Society-for-Biological-Therapy-of-Cancer Alexandria, VA, USA November 10 -13, 2005; 20051110
SPONSOR: Int Soc Biol Therapy Canc
ISSN: 1524-9557
DOCUMENT TYPE: Meeting; Meeting Abstract
RECORD TYPE: Citation
LANGUAGE: English

4/3/5 (Item 5 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

17781412 BIOSIS NO.: 200400148073
An adenoviral vector cancer vaccine that delivers a tumor associated antigen/CD40-ligand fusion protein to dendritic cells in vivo and thereby breaks tolerance to tumor associated self antigens.
AUTHOR: Tang Yucheng (Reprint); Zhang Lixin (Reprint); Akbulut Hakan (Reprint); Litton Phyllis-Jean (Reprint); Deisseroth Albert B (Reprint)
AUTHOR ADDRESS: Genetic Therapy Program, Sidney Kimmel Cancer Center, San Diego, CA, USA**USA
JOURNAL: Blood 102 (11): p745a November 16, 2003 2003
MEDIUM: print
CONFERENCE/MEETING: 45th Annual Meeting of the American Society of Hematology San Diego, CA, USA December 06-09, 2003; 20031206
SPONSOR: American Society of Hematology
ISSN: 0006-4971
DOCUMENT TYPE: Meeting; Meeting Poster; Meeting Abstract
RECORD TYPE: Abstract
LANGUAGE: English

4/3/6 (Item 6 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

17721687 BIOSIS NO.: 200400090456
An adenoviral vector cancer vaccine that delivers a tumor-associated antigen/ ***CD40*** - ***ligand*** fusion protein to dendritic cells.
AUTHOR: Zhang Lixin; Tang Yucheng; Akbulut Hakan; Zelterman Daniel; Linton Phyllis-Jean; Deisseroth Albert B (Reprint)
AUTHOR ADDRESS: Sidney Kimmel Cancer Center, San Diego, CA, 92121, USA**USA
AUTHOR E-MAIL ADDRESS: adeisseroth@skcc.org
JOURNAL: Proceedings of the National Academy of Sciences of the United States of America 100 (25): p15101-15106 December 9, 2003 2003
MEDIUM: print

ISSN: 0027-8424 _(ISSN print)
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

4/3/7 (Item 7 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

17530335 BIOSIS NO.: 200300487992
Injection of adenoviral vector encoding a secretable form of the E7//
CD40 ligand generates immunoresistance to E7 positive cell
lines for over 1 year.
AUTHOR: Tang Yucheng (Reprint); Zhang Lixin (Reprint); Maynard
Jonathan (Reprint); Deisseroth Albert (Reprint)
AUTHOR ADDRESS: Sidney Kimmel Cancer Center, San Diego, CA, USA**USA
JOURNAL: Proceedings of the American Association for Cancer Research Annual
Meeting 44 p589 July 2003 2003
MEDIUM: print
CONFERENCE/MEETING: 94th Annual Meeting of the American Association for
Cancer Research Washington, DC, USA July 11-14, 2003; 20030711
ISSN: 0197-016X
DOCUMENT TYPE: Meeting; Meeting Abstract
RECORD TYPE: Citation
LANGUAGE: English

4/3/8 (Item 1 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)

153545954 CA: 153(22)545954a JOURNAL
Addition of adenoviral vector targeting of chemotherapy to the
MUC-1/ecdCD40L VPPP vector prime protein boost vaccine prolongs survival
of mice carrying growing subcutaneous deposits of Lewis lung cancer cells
AUTHOR(S): Akbulut, H.; Tang, Y.; Akbulut, K. G.; Maynard, J.;
Deisseroth, A.
LOCATION: Department of Medical Oncology, Ankara University School of
Medicine, Ankara, Turk.,
JOURNAL: Gene Ther. (Gene Therapy) DATE: 2010 VOLUME: 17 NUMBER: 11
PAGES: 1333-1340 CODEN: GETHEC ISSN: 0969-7128 LANGUAGE: English
PUBLISHER: Nature Publishing Group

4/3/9 (Item 2 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)

146044177 CA: 146(3)44177a PATENT
Methods for immunotherapy of cancer using an expression vector encoding a
tumor vasculature antigen (TVECA)-CD40L fusion and/or a tumor antigen
vaccine
INVENTOR(AUTHOR): Tang, Yucheng; Deisseroth, Albert
LOCATION: USA
ASSIGNEE: Sidney Kimmel Cancer Center
PATENT: PCT International ; WO 2006130525 A2 DATE: 20061207
APPLICATION: WO 2006US20652 (20060526) *US 2005PV686534 (20050531) *US
2006PV795686 (20060428)
PAGES: 80pp. CODEN: PIXXD2 LANGUAGE: English
PATENT CLASSIFICATIONS:

CLASS: A61K-000/A
DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BW; BY; BZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; EG; ES; FI; GB; GD; GE; GH; GM; HR; HU; ID; IL; IN; IS; JP; KE; KG; KM; KN; KP; KR; KZ; LC; LK; LR; LS; LT; LU; LV; LY; MA; MD; MG; MK; MN; MW; MX; MZ; NA; NG; NI; NO; NZ; OM; PG; PH; PL; PT; RO; RU; SC; SD; SE; SG; SK; SL; SM; SY; TJ; TM; TN; TR; TT; TZ; UA; UG; US; UZ; VC; VN; YU; ZA DESIGNATED REGIONAL: AT; BE; BG; CH ; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IS; IT; LT; LU; LV; MC; NL; PL; PT; RO; SE; SI; SK; TR; BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML; MR; NE; SN; TD; TG; BW; GH; GM; KE; LS; MW; MZ; NA; SD; SL; SZ; TZ; UG; ZM; ZW; AM; AZ; BY; KG; KZ; MD; RU; TJ; TM

4/3/10 (Item 3 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)

145416537 CA: 145(21)416537c JOURNAL
Vector Prime/Protein Boost Vaccine That Overcomes Defects Acquired during Aging and Cancer
AUTHOR(S): Tang, Yucheng; Akbulut, Hakan; Maynard, Jonathan; Petersen, Line; Fang, Xiangming; Zhang, Wei-Wei; Xia, Xiaoqin; Koziol, James; Linton, Phyllis-Jean; Deisseroth, Albert
LOCATION: Sidney Kimmel Cancer Center, San Diego, CA, 92121, USA
JOURNAL: J. Immunol. (Journal of Immunology) DATE: 2006 VOLUME: 177
NUMBER: 8 PAGES: 5697-5707 CODEN: JOIMA3 ISSN: 0022-1767 LANGUAGE: English PUBLISHER: American Association of Immunologists

4/3/11 (Item 4 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)

145269288 CA: 145(14)269288s JOURNAL
Antitumor immune response induced by i.t. injection of vector-activated dendritic cells and chemotherapy suppresses metastatic breast cancer
AUTHOR(S): Akbulut, Hakan; Tang, Yucheng; Akbulut, K. Gonca; Maynard, Jonathan; Zhang, Lixin; Deisseroth, Albert
LOCATION: Sidney Kimmel Cancer Center, San Diego, CA, 92121, USA
JOURNAL: Mol. Cancer Ther. (Molecular Cancer Therapeutics) DATE: 2006 VOLUME: 5 NUMBER: 8 PAGES: 1975-1985 CODEN: MCTOCF ISSN: 1535-7163
LANGUAGE: English PUBLISHER: American Association for Cancer Research

4/3/12 (Item 5 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)

142054366 CA: 142(4)54366t JOURNAL
Multistep process through which adenoviral vector vaccine overcomes anergy to tumor-associated antigens
AUTHOR(S): Tang, Yucheng; Zhang, Lixin; Yuan, Jing; Akbulut, Hakan; Maynard, Jonathan; Linton, Phyllis-Jean; Deisseroth, Albert
LOCATION: Sidney Kimmel Cancer Center, San Diego, CA, USA
JOURNAL: Blood (Blood) DATE: 2004 VOLUME: 104 NUMBER: 9 PAGES: 2704-2713 CODEN: BLOOAW ISSN: 0006-4971 LANGUAGE: English PUBLISHER: American Society of Hematology

4/3/13 (Item 6 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)

141022193 CA: 141(2)22193x PATENT
Adenoviral vector vaccine
INVENTOR(AUTHOR): Deisseroth, Albert B.; Chang, Yucheng; Zhang, Lixin
LOCATION: USA
PATENT: PCT International ; WO 2004044176 A2 DATE: 20040527
APPLICATION: WO 2003US36237 (20031112) *US PV425286 (20021112)
PAGES: 42 pp. CODEN: PIXXD2 LANGUAGE: English
PATENT CLASSIFICATIONS:
CLASS: C12N-000/A
DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; BZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; EG; ES; FI; GB; GD; GE; GH; GM; HR; HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU; LV; MA; MD; MG; MK; MN; MW; MX; MZ; NI; NO; NZ; OM; PG; PH; PL; PT; RO; RU; SC; SD; SE; SG; SK; SL; SY; TJ; TM; TN; TR; TT; TZ; UA; UG; US; UZ; VC; VN; YU; ZA; ZM; ZW DESIGNATED REGIONAL: BW; GH; GM; KE; LS; MW; MZ; SD; SL ; SZ; TZ; UG; ZM; ZW; AM; AZ; BY; KG; KZ; MD; RU; TJ; TM; AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IT; LU; MC; NL; PT; RO; SE; SI; SK; TR; BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML; MR; NE; SN; TD; TG

? t s4/7/1-12

4/7/1 (Item 1 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0021275602 BIOSIS NO.: 200900617039
Use of CD40L immunoconjugates to overcome the defective immune response to vaccines for infections and cancer in the aged
AUTHOR: Tang Yu Cheng; Thoman Marilyn; Linton Phyllis-Jean; Deisseroth Albert (Reprint)
AUTHOR ADDRESS: US FDA, Off Oncol Drug Prod, 10903 New Hampshire Ave,Bldg 22,Room 6378, Silver Spring, MD 20993 USA**USA
AUTHOR E-MAIL ADDRESS: albert.deisseroth@yahoo.com
JOURNAL: Cancer Immunology Immunotherapy 58 (12): p1949-1957 DEC 2009 2009
ITEM IDENTIFIER: doi:10.1007/s00262-009-0718-3
ISSN: 0340-7004
DOCUMENT TYPE: Article; Literature Review
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Multiple investigators have reported the presence of defects in the immune response of the elderly [Castle In: Clin Infect Dis 31:578, 2000; Ortqvist et al. In: Eur Respir J 30:414-422, 2007; Saurwein-Teissl et al. In: J Immunol 168:5893, 2002; Haynes et al. In: Proc Natl Acad Sci USA 100:15053-15058, 2003]. These defects reduce the magnitude of the immune response to infection and to vaccination. In individuals greater than 55 years of age, the probability of developing a fully protective neutralizing antibody response to the yearly multivalent particle inactivated influenza vaccine is less than 20% [Jefferson et al. In: Lancet 264:1165-1174, 2005; Goodwin et al. In: Vaccine 24:1159-1169, 2006; Jackson et al. In: Lancet 372:398-405, 2008; Simonsen and Taylor In: Lancet 7:658-666, 2007]. The defects in the aged immune system that are responsible for this limited response to vaccination in the older age groups include functional defects of the antigen presenting cells, functional defects in CD4 helper CD4 T cells and monocytes, and an altered microenvironment [Eaton et al. In: J Exp Med 200:1613-1622, 2004; Dong et al. In: J Gen Virol 84:1623-1628, 2003; Deng et al. In: Immunology 172:3437-3446, 2004; Cella et al. In: J Exp Med 184:747-752, 1996]. Starting at puberty, the involution of the thymus and the consequent reduction of the export of na < ve T cells specific to

neo-antigens leads to the reduction of the ratio of antigen na < ve to memory cells as chronological age advances [Prelog In: Autoimmun Rev 5:136-139, 2006; McElhaney et al. In: J Immunology 176:6333-6339, 2006]. Changes in glycosylation of T cells and target antigens acquired during the aging process and the antibodies to these new glycopeptides and glycoproteins may also contribute to a reduction in the functioning of the adaptive immune response [Ishii et al. In: J Clin Neurosci 14:110-115, 2007; Shirai et al. In: Clin Exp Immunol 12:455-464, 1972; Adkins and Riley In: Mech Ageing Dev 103:147-164, 1998; Ben-Yehuda and Weksler In: Cancer Investigation 10:525-531, 1992]. One of the more interesting examples of the functional defects in the cells of the adaptive immune response is a reduced level of expression in the surface cytoadhesion and activation receptor molecules on CD4 helper T cells undergoing activation during vaccination. Upon infection or vaccination, CD40L is typically increased on the surface of CD4 helper T cells during activation, and this increased expression is absolutely essential to the CD40L promotion of expansion of antigen-specific B cells and CD 8 effector T cells in response to infection or vaccination [Singh et al. In: Protein Sci 7:1124-1135, 1998; Grewal and Flavell In: Immunol Res 16: 59-70, 1997; Kornbluth In: J Hematother Stem Cell Res 11:787-801, 2002; Garcia de Vinuesa et al. In: Eur J Immunol 29:3216-3224, 1999]. In aged human beings and mice, the reduced levels of expression of CD40 ligand (CD40L) in activated CD4 helper T cells is dramatically reduced [Eaton et al. In: J Exp Med 200:1613-1622, 2004; Dong et al. In: J Gen Virol 84:1623-1628, 2003]. To circumvent the reduction in CD40L expression and the subsequent reduction in immune response in the elderly, we have developed a chimeric vaccine comprised of the CD40L linked to the target antigen, in a replication incompetent adenoviral vector and in booster protein. This review will discuss the implementation the potential use of this approach for the vaccination of the older populations for cancer and infection.

4/7/2 (Item 2 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0020919266 BIOSIS NO.: 200900259600
Vector Prime-Protein Boost Vaccine induces 20 Fold Decrease in the Levels of CD44(+)CD24(-/Low) Cancer Stem Cells in Epithelial Neoplasms
AUTHOR: Tang Yucheng (Reprint); Akbulut Hakan; Maynard Jonathan; Li Pingchaun; Deisseroth Albert B
AUTHOR ADDRESS: Sidney Kimmel Canc Ctr, San Diego, CA USA**USA
JOURNAL: Blood 112 (11): p1000 NOV 16 2008 2008
CONFERENCE/MEETING: 50th Annual Meeting of the American-Society-of-Hematology San Francisco, CA, USA December 06 -09, 2008; 20081206
SPONSOR: Amer Soc Hematol
ISSN: 0006-4971
DOCUMENT TYPE: Meeting; Meeting Poster
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Since a significant portion (30%) of individuals diagnosed with epithelial neoplasms have highly chemotherapy resistant CD44(+)CD24(-/Low) cancer stem cells in the peripheral blood as well as in solid tumor nodules at diagnosis, we have been developing methods of cancer treatment which depend on methods of killing the cancer stem cells which depend on mechanisms other than chemotherapy for treatment. Vaccination has been one of these approaches. Unfortunately, it has been known for a long time that the immune response is diminished in older

individuals due to decreased numbers of CD4 and CD8 T cells and due to acquisition of functional defects in CD4 cells. An example is the diminished expression of the CD40L in activated CD4 T cells in older individuals which limits the cellular and humoral response to vaccines in the older age groups. The presence of the CD40L on the CD4 helper T cells is important for vaccine induced expansion of antigen specific T cells and B cells. In order to overcome these problems, we have developed an Ad-sig-TAA/ecdCD40L vector prime-TAA/ecdCD40L protein boost vaccine strategy. The Ad-sig-TAA/ecdCD40L carries a transcription unit encoding the extracellular domain Iced) of the CD40 ligand (CD40L) linked to tumor associated antigen (TAA). The TAA are in turn linked to a secretory signal peptide (sig) so that the TAA/ecdCD40L protein will be secreted from the vector infected cells at the injection site of the ***vector*** continuously over a 10-14 day period. The ***CD40L*** targets the TAA to the DCs, activates the DCs, and carries the TAA into the DC so that the TAA fragments are presented on Class I MHC. The sc injection of the TAA/ecdCD40L protein booster following the sc administration of the Ad-sig-TAA/ecdCD40L (we call this the TAA/ecdCD40L VPP vaccine) induces complete regressions of pre-existing tumor even in aged mice (18 months old). We then chose human MUC-1 as the TAA for testing the efficacy of our vaccine platform for cancer stem cells. Over 90% of the late stage patients with cancers of the breast, ovary, prostate, and lung have been reported to overexpress a hypoglycosylated form of MUC-1 which correlates with decreased time to progression. The hypoglycosylation on MUC-1 in cancer cells creates a tumor specific target for vaccines. Kufe's lab has shown that overexpression of MUC-1 in the cancer cell promotes resistance to therapy by reducing p53 (Cancer Cell 7: 167, 2005) and induces proliferation by activation of the NFkappaB (Nature Cell Biology 9: 1419, 2007). Finn's lab has shown that MUC-1 is a marker present on >90% of the "tumor stem cell" population as well as the more mature cells in breast cancer (Ca Res 68: 2419, 2008). In order to test the efficacy of the hMUC-1/ecdCD40L V-PP vaccine on tumor stem cells, we first isolated hMUC-1 positive Lewis Lung carcinoma cells by stably transfecting the hMUC-1 cDNA into these cells. We showed that the Ad-sig-hMUC-1/ecdCD40L vector prime-hMUC-1/ecdCD40L protein boost vaccine overcomes anergy to hMUC-1 antigen (hMUC-1) in hMUC-1. Tg mice. We then injected 100,000 human MUC-1 positive Lewis Lung mouse carcinoma cells (LL2/LL1hMUC-1) mouse cancer cells into the syngeneic C57BL/6J mice. ELISPOT assay showed that the hMUC-1/ecdCD40L VPP vaccine increased the level of antigen specific CD8 effector cells in the lymph node draining the site of injection of the tumor to 900 hMUC-1 specific CD8 T cells/1 00,000 total cells and to 325 hMUC-1 specific CD8 T cells/100, 000 cells in the spleen.The level of cytotoxicity of spleen cells increased 6 fold folowing vaccination (spleen cells from control and vaccinated mice were exposed in vitro to mitomycin C treated hMUC positive LL2/LL1hMUC-1 cells for 5 days before testing). Measurement of the growth of the sc tumor nodule at the sc injection site showed a 20 fold decrease in the total size of the tumor in the vaccinated vs the control mice and the size of the tumor was decreasing in the vaccinated mice vs the control group at the time of sacrifice at 24 days. Finally, the tumor nodule from the vaccinated and unvaccinated mice were excised post mortem, minced, treated with collagenase and DNAse I and strained through gauze. FACS analysis showed that in the vaccinated mice, the number of the MUC-1 positive tumor stem cells with the CD44(+)CD24(-) immunophenotype decreased over 20 fold during the treatment period. These results suggest that the hMUC-1/ecdCD40L VPP vaccine could suppress the levels of hMUC-1 cancer stem cells in pre-existing tumor nodules. This vaccine platform has entered clinical phase I testing.

4/7/3 (Item 3 from file: 5)

0020916731 BIOSIS NO.: 200900257065
TAA/ecdCD40L VPP Vaccination Induces Robust Adaptive Immune Response Even in Individuals with Post Transplantation Lymphopenia
AUTHOR: Tang Yucheng (Reprint); Park Yeon Hee; Maynard Jonathan; Li Pingchuan; Akbulut Hakan; Petersen Line; Deisseroth Albert B
AUTHOR ADDRESS: Sidney Kimmel Canc Ctr, San Diego, CA USA**USA
JOURNAL: Blood 112 (11): p141-142 NOV 16 2008 2008
CONFERENCE/MEETING: 50th Annual Meeting of the American-Society-of-Hematology San Francisco, CA, USA December 06 -09, 2008; 20081206
SPONSOR: Amer Soc Hematol
ISSN: 0006-4971
DOCUMENT TYPE: Meeting; Meeting Abstract
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Individuals of advanced chronological age exhibit an impaired immune response to vaccines. This may be due to a reduction in the ratio of antigen naive/memory CD4 and CD8 T cells and acquisition of functional defects in activated "helper" CD4 T cells (eg diminished CD40 ligand (CD40L) expression) during the aging process. The absence of the CD40L on activated CD4 helper T cells reduces the magnitude of expansion of antigen specific T and B cells induced by vaccination. In order to circumvent this defective response to vaccines among individuals in the fifth and sixth decades of life, our laboratory has developed an adenoviral vector (Ad-sig-TAA/ecdCD40L) vaccine which is designed to overcome the absence of CD40L expression in activated CD4 helper T cells in older individuals. The subcutaneous (sc) injection of this vector leads to the release of a fusion protein composed of a TAA linked to the extracellular domain (ecd) of the CD40L, which binds to the CD40 receptor on DCs, activates the DCs, and leads to the presentation of TAA fragments on Class I MHC. Two sc injections of the TAA/ecdCD40L protein as a booster following the sc administration of the Ad-sig-TAA/ecdCD40L vector (we call this the TAA/ecdCD40L VPP vaccine) expands the magnitude of the cellular and Immoral immune response induced by the vector in 18 month old aged mice as well as in younger mice. In order to explore ways of further amplifying the immune response induced by this vaccine. we decided to test the feasibility of using this vaccine following treatments which reduce the number of T cells in the body of the test subject. We hypothesized that during states of chemotherapy or radiation induced lymphopenia, the number of negative regulatory CD4CD25FoxP3 T cells would be reduced, and all of the regulatory signals in the T cell compartment would be promoting expansion of T cells. thus creating an ideal state for vaccination. To test this hypothesis, we injected 100,000 cells from an established neoplastic cell line sc. Three days later, we administered myeloablative doses of total body irradiation (TBI) followed by a T cell depleted syngencic bone marrow transplant (TCDBMT) to reconstitute neutrophil and platelet production. Three days following the TBI and TCDBMT. we intravenously infused donor lymphocytes (DLI) from a TAA/ecdCD40L VPP vaccinated syngeneic donor. Four weeks later. we vaccinated the recipient mouse further with TAA/ccdCD40L sc injections. We tested this for a TAA composed of a junctional peptide from the p210Bcr-Abl protein of chronic myelogenous leukemia (CML) and for the E7 protein of the human papilloma virus (HPV). We found that in the case of the BcrAbl/ecdCD40L VPP vaccine, 50% of the mice treated with TBI, TCDBMT, ten million lymphocytes (DLI) from BcrAbl/ecdCD40L VPP vaccinated syngeneic donors followed in 4 weeks by 3 BcrAbl/ecdCD40L protein sc injections of the recipient test mouse, developed a complete

response with the vaccination and that these mice remained disease free beyond 250 days after injection of the P210Bcr-Abl positive 32D leukemia cells, whereas C56BL/6J test mice treated with TBI and TCDBMT without DLI from vaccinated donors nor sc BcrAbl/ecdCD40L sc booster vaccination following injection with the p210Bcr-AbI positive 32D myeloid leukemia cell line all died by day 32. Mice treated with TBI. TCDBMT, DLI from unvaccinated donors followed by vaccination of the recipient with 3 sc BcrAbl/ecdCD40L protein injections exhibited a degree of leukemia suppression that was equal to mice receiving TBI.TCDBMT, DLI from a BcrAbl/ecdCD40LVPP vaccinated donor and BcrAbl/ecdCD40L vaccination. To test the effect of the TAA/ecdCD40L VPP vaccine against an antigen associated with an epithelial neoplasm, we injected 100,000 E7 positive TC-1 mouse cancer cells into syngeneic C57BL6J mice followed in 3-5 days by myeloablative doses of TBI and engrafting doses of TCDBMT. Three days later. the mice received 10 million spleen cells from syngeneic donor mice previously vaccinated with the E7/ecdCD40L VPP vaccine. Finally, 4 weeks later, the test mice received sc E7/ecdCD40L protein booster injections. The vaccinated mice achieved much greater degrees of tumor suppression than was seen following TBI and TCDBMT without DLI from vaccinated donors. These studies show that it is possible to induce a robust adaptive immune response by vaccination with the TAA/ecdCD40L VPP vaccine even in severely lymphopenic individuals.

4/7/4 (Item 4 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

18792546 BIOSIS NO.: 200600137941
Ad-sig-TAA/CD40L vector prime-TAA/CD40L protein boost vaccine for epithelial neoplasms
AUTHOR: Tang Yucheng (Reprint); Maynard Jonathan; Linton Phyllis-Jean; Zhang Wei-Wei; Fang Xiang-Ming; Deisseroth Albert
AUTHOR ADDRESS: Sidney Kimmel Canc Ctr, San Diego, CA USA**USA
JOURNAL: Journal of Immunotherapy 28 (6): p638 NOV-DEC 2005 2005
CONFERENCE/MEETING: 20th Annual Scientific Meeting of the International-Society-for-Biological-Therapy-of-Cancer Alexandria, VA, USA November 10 -13, 2005; 20051110
SPONSOR: Int Soc Biol Therapy Canc
ISSN: 1524-9557
DOCUMENT TYPE: Meeting; Meeting Abstract
RECORD TYPE: Citation
LANGUAGE: English

4/7/5 (Item 5 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

17781412 BIOSIS NO.: 200400148073
An adenoviral vector cancer vaccine that delivers a tumor associated antigen/CD40-ligand fusion protein to dendritic cells in vivo and thereby breaks tolerance to tumor associated self antigens.
AUTHOR: Tang Yucheng (Reprint); Zhang Lixin (Reprint); Akbulut Hakan (Reprint); Litton Phyllis-Jean (Reprint); Deisseroth Albert B (Reprint)
AUTHOR ADDRESS: Genetic Therapy Program, Sidney Kimmel Cancer Center, San Diego, CA, USA**USA
JOURNAL: Blood 102 (11): p745a November 16, 2003 2003
MEDIUM: print
CONFERENCE/MEETING: 45th Annual Meeting of the American Society of

Hematology San Diego, CA, USA December 06-09, 2003; 20031206
SPONSOR: American Society of Hematology
ISSN: 0006-4971
DOCUMENT TYPE: Meeting; Meeting Poster; Meeting Abstract
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Our laboratory has developed an in vivo vector based method of activating and tumor antigen loading dendritic cells (DCs) for 10 days continuously to generate a T cell dependent systemic immune response against self antigens associated with cancer cells. We have shown that the subcutaneous injection of this vector is capable of breaking the tolerance of the immune response to the self antigens of the cancer cells. This adenoviral ***vector*** (Ad), designated Ad-sig-TAA/ecdCD40L, carries a transcription unit encoding the extracellular domain (ecd) of the CD40 ligand (CD40L) linked to tumor associated antigens (TAA), either the self antigen MUC-1 or the foreign viral antigen HPV E7 that were in turn linked to a secretory signal peptide (sig). The TAA/ecdCD40L protein is secreted from the infected cells at the injection site of the vector continuously over a 10-14 day period. We showed that the TAA/ecdCD40L protein binds to DCs near the injection site which then migrate to regional lymph nodes where they activate a CD8+ T cell systemic immune response against TAA positive tumor cells. The first vector studied (Ad-sig-E7/ecdCD40L) carried a transcription unit encoding the ecd of the CD40L linked to E7, that was in turn linked to a secretory signal peptide (sig). ELISPOT, tetramer staining and cytotoxicity assays all showed that subcutaneous injection of the Ad-sig-E7/ecdCD40L vector can increase the level of antigen specific cytotoxic lymphocytes (CTLs) by eliciting a Th-1 response E7 positive TC-1 tumor cells. The subcutaneous injection of Ad-sig-E7/ecdCD40L prevents engraftment of at least 5X105 TC-1 cells in the vector injected animals for up to 12 months. We also demonstrated that the immunization with Ad-sig-E7/ecdCD40L vector leads to the induction of a far more robust TAA-specific CD8+ T cell response than vaccinations with the non-secretable TAA-CD40L transcription unit or the TAA transcription unit or the ***CD40L*** transcription unit alone. The second vector studied (Ad-sig-hMUC-1/ecdCD40L) carried a human MUC-1 (hMUC-1)/ecdCD40L transcription unit. The subcutaneous injection of this vector into hMUC-1 transgenic (hMUC-1.Tg) mice, which are anergic to hMUC-1, resulted in the induction of a hMUC-1 specific immune response, which could suppress the growth of the hMUC-1 mouse cancer cells. We were able to show that the level of hMUC-1 specific CD8+ T cells increases in the spleen of the mice vaccinated with the Ad-sig-hMUC-1/ecdCD40L vector. These hMUC-1 specific cytotoxic lymphocytes demonstrated cytolytic activity, the ability to produce interferon gamma, and the ability to proliferate following exposure to the hMUC-1 antigen positive cells. The Ad-sig-hMUC-1/ecdCD40L vector injections induced an antigen specific T cell immune response against cancer cells positive for the hMUC-1 antigen in MUC-1.Tg mice which are anergic to the hMUC-1 antigen. No other cytokine or immune enhancing treatments were required to induce the T cell immune response to the hMUC-1 positive cancer cells in 100% of the mice tested. These findings suggest that vaccination with the Ad-sig-TAA-ecdCD40L vector can break tolerance to human MUC-1 positive tumor cells in transgenic mice which are anergic to this antigen. Thus, this vector may be of use for the in vivo immunotherapy of the many neoplasms that over-express the MUC-1 self antigen.

17721687 BIOSIS NO.: 200400090456
An adenoviral vector cancer vaccine that delivers a tumor-associated antigen/ ***CD40*** - ***ligand*** fusion protein to dendritic cells.
AUTHOR: Zhang Lixin; Tang Yucheng; Akbulut Hakan; Zelterman Daniel; Linton Phyllis-Jean; Deisseroth Albert B (Reprint)
AUTHOR ADDRESS: Sidney Kimmel Cancer Center, San Diego, CA, 92121, USA**USA
AUTHOR E-MAIL ADDRESS: adeisseroth@skcc.org
JOURNAL: Proceedings of the National Academy of Sciences of the United States of America 100 (25): p15101-15106 December 9, 2003 2003
MEDIUM: print
ISSN: 0027-8424 _(ISSN print)
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: To develop a method to overcome the anergy that exists in tumor hosts to cancer, we have designed an adenoviral vector for the in vivo activation and tumor antigen loading of dendritic cells. This adenoviral vector encodes a fusion protein composed of an amino-terminal tumor-associated antigen fragment fused to the CD40 ligand (***CD40L***). Subcutaneous injection of an adenoviral ***vector*** encoding a fusion protein of the human papillomavirus E7 foreign antigen linked to the CD40L generates CD8+ T cell-dependent immunoresistance to the growth of the E7-positive syngeneic TC-1 cancer cells in C57BL/6 mice for up to 1 year. We also studied the s.c. injection of a vector carrying the gene for the human MUC-1 (hMUC-1) self-antigen fused to the ***CD40L*** . When this ***vector*** was injected into hMUC-1.Tg mice, which are transgenic for the hMUC-1 antigen, the growth of syngeneic hMUC-1-positive LL1/LL2hMUC-1 mouse cancer cells was suppressed in 100% of the injected animals. The hMUC-1.Tg mice are anergic to the hMUC-1 antigen before the injection of the vector. These experimental results show that it is possible to use vector injection to activate a long-lasting cellular immune response against self-antigens in anergic animals. The vector-mediated in vivo activation, and tumor-associated antigen loading of dendritic cells does not require additional cytokine boosting to induce the immune response against the tumor cells. This vector strategy may therefore be of use in the development of immunotherapy for the many carcinomas in which the hMUC-1 antigen is overexpressed.

4/7/7 (Item 7 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

17530335 BIOSIS NO.: 200300487992
Injection of adenoviral vector encoding a secretable form of the E7/ CD40 ligand generates immunoresistance to E7 positive cell lines for over 1 year.
AUTHOR: Tang Yucheng (Reprint); Zhang Lixin (Reprint); Maynard Jonathan (Reprint); Deisseroth Albert (Reprint)
AUTHOR ADDRESS: Sidney Kimmel Cancer Center, San Diego, CA, USA**USA
JOURNAL: Proceedings of the American Association for Cancer Research Annual Meeting 44 p589 July 2003 2003
MEDIUM: print
CONFERENCE/MEETING: 94th Annual Meeting of the American Association for Cancer Research Washington, DC, USA July 11-14, 2003; 20030711
ISSN: 0197-016X
DOCUMENT TYPE: Meeting; Meeting Abstract
RECORD TYPE: Citation

LANGUAGE: English

4/7/8 (Item 1 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)

153545954 CA: 153(22)545954a JOURNAL
Addition of adenoviral vector targeting of chemotherapy to the MUC-1/ecdCD40L VPPP vector prime protein boost vaccine prolongs survival of mice carrying growing subcutaneous deposits of Lewis lung cancer cells
AUTHOR(S): Akbulut, H.; Tang, Y.; Akbulut, K. G.; Maynard, J.; Deisseroth, A.
LOCATION: Department of Medical Oncology, Ankara University School of Medicine, Ankara, Turk.,
JOURNAL: Gene Ther. (Gene Therapy) DATE: 2010 VOLUME: 17 NUMBER: 11 PAGES: 1333-1340 CODEN: GETHEC ISSN: 0969-7128 LANGUAGE: English
PUBLISHER: Nature Publishing Group
SECTION:
CA201006 Pharmacology
CA203XXX Biochemical Genetics
CA215XXX Immunochemistry
IDENTIFIERS: adenovirus gene therapy MUC1 CD40L Lewis lung cancer anticancer, fluorouracil fluorocytosine vaccination lung cancer anticancer
DESCRIPTORS:
Adenoviral vectors... Antitumor agents... Combination chemotherapy... Gene therapy... Human adenovirus 5... Human... Lung,neoplasm... Vaccines...
adenoviral vector targeted chemotherapy to hMUC-1/ecdCD40L VPPP vector prime protein boost vaccine with i.p. 5-FC compared to adding therapy with 5-FU improved survival of mouse with s.c. deposit of L
CD44(antigen)...
adenoviral vector targeted chemotherapy to hMUC-1/ecdCD40L VPPP vector prime protein boost vaccine with i.p. 5-FC compared to 5-FU reduced CD44+CD24- cell in mouse with s.c. deposit of Lewis lung canc
Interleukin 4...
adenoviral vector targeted chemotherapy to hMUC-1/ecdCD40L VPPP vector prime protein boost vaccine with i.p. 5-FC than to 5-FU increased IL-4 secreting T cell in mouse with s.c. deposit of Lewis lung
Spleen...
adenoviral vector targeted chemotherapy to hMUC-1/ecdCD40L VPPP vector prime protein boost vaccine with i.p. 5-FC than to 5-FU increased splenocyte level in mouse with s.c. deposit of Lewis lung cance
Lymph node...
adenoviral vector targeted chemotherapy to hMUC-1/ecdCD40L VPPP vector prime protein vaccine with i.p. 5-FC than to 5-FU increased IL-4 secreting T cell of lymph node in mouse with s.c. deposit of Lew
Cell proliferation...
adenoviral vector targeted chemotherapy to hMUC-1/ecdCD40L VPPP vector prime protein vaccine with i.p. 5-fluorocytosine inhibited tumor growth in mouse with s.c. deposit of Lewis lung cancer cell
Neoplasm...
adenoviral vector targeted chemotherapy to hMUC-1/ecdCD40L VPPP vector prime protein vaccine with i.p. 5-fluorocytosine reduced tumor vol. in mouse with s.c. deposit of Lewis lung cancer cell
CD8-positive T cell...
adenoviral vector targeted chemotherapy to hMUC-1/ecdCD40L VPPP vector with i.p. 5-FC did not induce toxicity in CD8+ T cell tumor-draining lymph node in mouse with s.c. deposit of Lewis lung cancer c
CD antigens...
CD24; adenoviral vector targeted chemotherapy to hMUC-1/ecdCD40L VPPP

vector prime protein boost vaccine with i.p. 5-FC compared to 5-FU reduced CD44+CD24- cell in mouse with s.c. deposit of Lewis lun
Gene,animal...
CD40L; adenoviral vector targeted chemotherapy to hMUC-1/ecdCD40L VPPP vector prime protein boost vaccine with i.p. 5-FC compared to adding therapy with 5-FU improved survival of mouse with s.c. depos
Interferons...
γ; adenoviral vector targeted chemotherapy to hMUC-1/ecdCD40L VPPP vector prime protein boost vaccine with i.p. 5-FC than to 5-FU increased IFN-γ secreting T cell in mouse with s.c. deposi
Gene,animal...
muc1; adenoviral vector targeted chemotherapy to hMUC-1/ecdCD40L VPPP vector prime protein boost vaccine with i.p. 5-FC compared to adding therapy with 5-FU improved survival of mouse with s.c. deposi
Chimeric gene,animal... Fusion proteins(chimeric proteins)...
MUC1/ecdCD40L; adenoviral vector targeted chemotherapy to hMUC-1/ecdCD40L VPPP vector prime protein boost vaccine with i.p. 5-FC compared to adding therapy with 5-FU improved survival of mouse with s.
Spleen...
splenocyte; adenoviral vector targeted chemotherapy to hMUC-1/ecdCD40L VPPP vector prime protein boost vaccine with i.p. 5-FC than to 5-FU increased splenocyte level in mouse with s.c. deposit of Lewi
CAS REGISTRY NUMBERS:
51-21-8 2022-85-7 adenoviral vector targeted chemotherapy to hMUC-1/ecdCD40L VPPP vector prime protein boost vaccine with i.p. 5-FC compared to adding therapy with 5-FU improved survival of mouse with s.c. deposit of Lewis lung cancer cell

4/7/9 (Item 2 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)

146044177 CA: 146(3)44177a PATENT
Methods for immunotherapy of cancer using an expression vector encoding a tumor vasculature antigen (TVECA)-CD40L fusion and/or a tumor antigen vaccine
INVENTOR(AUTHOR): Tang, Yucheng; Deisseroth, Albert
LOCATION: USA
ASSIGNEE: Sidney Kimmel Cancer Center
PATENT: PCT International ; WO 2006130525 A2 DATE: 20061207
APPLICATION: WO 2006US20652 (20060526) *US 2005PV686534 (20050531) *US 2006PV795686 (20060428)
PAGES: 80pp. CODEN: PIXXD2 LANGUAGE: English
PATENT CLASSIFICATIONS:
CLASS: A61K-000/A
DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BW; BY; BZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; EG; ES; FI; GB; GD; GE; GH; GM; HR; HU; ID; IL; IN; IS; JP; KE; KG; KM; KN; KP; KR; KZ; LC; LK; LR; LS; LT; LU; LV; LY; MA; MD; MG; MK; MN; MW; MX; MZ; NA; NG; NI; NO; NZ; OM; PG; PH; PL; PT; RO; RU; SC; SD; SE; SG; SK; SL; SM; SY; TJ; TM; TN; TR; TT; TZ; UA; UG; US; UZ; VC; VN; YU; ZA DESIGNATED REGIONAL: AT; BE; BG; CH ; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IS; IT; LT; LU; LV; MC; NL; PL; PT; RO; SE; SI; SK; TR; BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML; MR; NE; SN; TD; TG; BW; GH; GM; KE; LS; MW; MZ; NA; SD; SL; SZ; TZ; UG; ZM; ZW; AM; AZ; BY; KG; KZ; MD; RU; TJ; TM
SECTION:
CA215002 Immunochemistry
CA201XXX Pharmacology
CA203XXX Biochemical Genetics
IDENTIFIERS: cancer vaccine expression vector tumor antigen, tumor

vasculature antigen TVECA CD40 ligand fusion anticancer immunotherapy

DESCRIPTORS:

Immunostimulants...
adjuvants, fusion protein administered with; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine

Immunization...
against cancer; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine

Antibodies and Immunoglobulins...
against TVECA, generation of; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine

Antigens...
autoantigens; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine

Glycoproteins...
CD40-L (antigen CD40 ligand), fusion with TVECA; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine

Peptides,biological studies...
compds., linker, between TVECA and CD40 ligand; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine

Protein motifs...
cytoplasmic domain, CD40L lacking; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine

CD8-positive T cell...
cytotoxic, against TVECA, generation of; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine

T cell(lymphocyte)...
cytotoxic, CD8+, against TVECA, generation of; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine

Proteins...
endosialin, (tumor endothelial marker 1; Tem1), as TVECA, fusion with CD40 ligand; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion a

Blood vessel...
endothelium, tumor, antigen specifically assocd. with; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine

Promoter(genetic element)...
enhancer, from human cytomegalovirus; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine

Protein motifs...
extracellular domain, of mucin MUC1, in tumor antigen vaccine; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen

Proteins...
E7, from HPV, in tumor antigen vaccine; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine

neu(receptor)...
HER-2, in tumor antigen vaccine; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen

(TVECA)-CD40L fusion and/or tumor antigen vaccine
Annexins...
I, as TVECA, fusion with CD40 ligand; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Mucins...
in tumor antigen vaccine; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Virus replication...
in tumor cells, vector rendered non-replicating in normal human cells; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor
Drug delivery systems...
injections, s.c.; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Peptides,biological studies...
linker, between TVECA and CD40 ligand; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Immunotherapy... Neoplasm... Antitumor agents... Genetic vectors... Gene therapy... Human... Viral vectors... Adenoviral vectors... Molecular cloning... Epitopes...
methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Mucins...
MUC1, in tumor antigen vaccine; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Mucins...
MUC12, in tumor antigen vaccine; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Mucins...
MUC13, in tumor antigen vaccine; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Mucins...
MUC15, in tumor antigen vaccine; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Mucins...
MUC16, in tumor antigen vaccine; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Mucins...
MUC2, in tumor antigen vaccine; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Mucins...
MUC3, A, in tumor antigen vaccine; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Mucins...
MUC3, B, in tumor antigen vaccine; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Mucins...
MUC4, in tumor antigen vaccine; methods for immunotherapy of cancer

(TVECA)-CD40L fusion and/or tumor antigen vaccine
Vaccines...
tumor; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Antigens...
TVECA (tumor vascular endothelial cell antigen), fusion with CD40 ligand; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tum
Chimeric gene...
TVECA-CD40L, vector comprising; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Fusion proteins(chimeric proteins)...
TVECA-CD40L, vector encoding; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Vascular endothelial growth factor receptors...
type VEGFR-1, as TVECA, fusion with CD40 ligand; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Tumor antigens...
vaccine; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Antitumor agents...
vaccines; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Endothelium...
vascular, tumor, antigen specifically assocd. with; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Annexins...
VIII, as TVECA, fusion with CD40 ligand; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine

CAS REGISTRY NUMBERS:

916351-06-9 916351-08-1 unclaimed nucleotide sequence; methods for immunotherapy of cancer using an expression vector encoding a tumor vasculature antigen (TVECA)-CD40L fusion and/or a tumor antigen vaccine
916351-07-0 916351-09-2 unclaimed protein sequence; methods for immunotherapy of cancer using an expression vector encoding a tumor vasculature antigen (TVECA)-CD40L fusion and/or a tumor antigen vaccine
916351-10-5 916335-63-2 916335-64-3 916335-65-4 916351-11-6
916335-66-5 916335-67-6 129437-45-2 853356-32-8 565468-47-5
135824-91-8 511228-33-4 207690-17-3 565468-52-2 565468-53-3
916335-68-7 350810-65-0 916351-12-7 916351-13-8 916351-14-9
916351-15-0 916351-16-1 916351-17-2 916351-18-3 853356-30-6
916351-19-4 916351-20-7 916351-21-8 916351-22-9 916351-23-0
916351-24-1 916351-25-2 916351-26-3 916351-27-4 916351-28-5
916351-29-6 853356-31-7 404594-06-5 916351-30-9 916351-31-0
916351-32-1 916351-33-2 205041-14-1 916351-34-3 916351-35-4
916351-36-5 916351-37-6 916351-38-7 916351-39-8 916351-40-1
916351-41-2 916351-42-3 916351-43-4 916351-44-5 916351-45-6
916351-46-7 916351-47-8 916351-48-9 916351-49-0 160212-35-1
856768-14-4 856768-15-5 916351-50-3 916351-51-4 916351-52-5
916351-53-6 916351-54-7 916351-55-8 916351-56-9 916351-57-0
916351-58-1 916351-59-2 916351-60-5 unclaimed sequence; methods for immunotherapy of cancer using an expression vector encoding a tumor vasculature antigen (TVECA)-CD40L fusion and/or a tumor antigen vaccine

4/7/10 (Item 3 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)

145416537 CA: 145(21)416537c JOURNAL
Vector Prime/Protein Boost Vaccine That Overcomes Defects Acquired during Aging and Cancer
AUTHOR(S): Tang, Yucheng; Akbulut, Hakan; Maynard, Jonathan; Petersen, Line; Fang, Xiangming; Zhang, Wei-Wei; Xia, Xiaoqin; Koziol, James; Linton, Phyllis-Jean; Deisseroth, Albert
LOCATION: Sidney Kimmel Cancer Center, San Diego, CA, 92121, USA
JOURNAL: J. Immunol. (Journal of Immunology) DATE: 2006 VOLUME: 177 NUMBER: 8 PAGES: 5697-5707 CODEN: JOIMA3 ISSN: 0022-1767 LANGUAGE: English PUBLISHER: American Association of Immunologists
SECTION:
CA215002 Immunochemistry
CA214XXX Mammalian Pathological Biochemistry
IDENTIFIERS: immunization breast cancer vaccine aging mucin CD40 ligand
DESCRIPTORS:
Glycoproteins...
CD40-L (antigen CD40 ligand), extracellular domain, fusion product with tumor assocd. antigen; vector prime/protein boost vaccine that overcomes defects acquired during aging and cancer
T cell(lymphocyte)...
cytotoxic; vector prime/protein boost vaccine that overcomes defects acquired during aging and cancer
Dendritic cell...
fusion product with extracellular domain of CD40 ligand; vector prime/protein boost vaccine that overcomes defects acquired during aging and cancer
Annexins...
I; vector prime/protein boost vaccine that overcomes defects acquired during aging and cancer
Mucins...
MUC1, fusion product with extracellular domain of CD40 ligand; vector prime/protein boost vaccine that overcomes defects acquired during aging and cancer
Vaccines...
tumor; vector prime/protein boost vaccine that overcomes defects acquired during aging and cancer
Antitumor agents...
vaccines; vector prime/protein boost vaccine that overcomes defects acquired during aging and cancer
Aging,animal... Antibodies and Immunoglobulins... CD8-positive T cell... Human... Immunization... Mammary gland,neoplasm... Tumor antigens...
vector prime/protein boost vaccine that overcomes defects acquired during aging and cancer

4/7/11 (Item 4 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)

145269288 CA: 145(14)269288s JOURNAL
Antitumor immune response induced by i.t. injection of vector-activated dendritic cells and chemotherapy suppresses metastatic breast cancer
AUTHOR(S): Akbulut, Hakan; Tang, Yucheng; Akbulut, K. Gonca; Maynard, Jonathan; Zhang, Lixin; Deisseroth, Albert
LOCATION: Sidney Kimmel Cancer Center, San Diego, CA, 92121, USA

JOURNAL: Mol. Cancer Ther. (Molecular Cancer Therapeutics) DATE: 2006
VOLUME: 5 NUMBER: 8 PAGES: 1975-1985 CODEN: MCTOCF ISSN: 1535-7163
LANGUAGE: English PUBLISHER: American Association for Cancer Research
SECTION:
CA215002 Immunochemistry
CA201XXX Pharmacology
IDENTIFIERS: adenovirus vector dendritic cell chemotherapy breast cancer antitumor immunity
DESCRIPTORS:
Adenoviral vectors...
AdCDIRESE1A; antitumor immune response induced by i.t. injection of vector-activated dendritic cells and chemotherapy suppresses metastatic breast cancer
Adoptive immunotherapy... Adenoviridae... Gene therapy... Antitumor agents ... Tumor antigens... neu(receptor)... Human... T cell(lymphocyte)...
Dendritic cell... Lung,neoplasm... Adenoviral vectors... Chemotherapy...
antitumor immune response induced by i.t. injection of vector-activated dendritic cells and chemotherapy suppresses metastatic breast cancer
Immunity...
antitumor; antitumor immune response induced by i.t. injection of vector-activated dendritic cells and chemotherapy suppresses metastatic breast cancer
Glycoproteins...
CD40-L (antigen CD40 ligand); antitumor immune response induced by i.t. injection of vector-activated dendritic cells and chemotherapy suppresses metastatic breast cancer
Drug delivery systems...
i.t.; antitumor immune response induced by i.t. injection of vector-activated dendritic cells and chemotherapy suppresses metastatic breast cancer
Cell proliferation...
inhibition; antitumor immune response induced by i.t. injection of vector-activated dendritic cells and chemotherapy suppresses metastatic breast cancer
Mammary gland,neoplasm...
metastasis; antitumor immune response induced by i.t. injection of vector-activated dendritic cells and chemotherapy suppresses metastatic breast cancer
Vaccines...
tumor; antitumor immune response induced by i.t. injection of vector-activated dendritic cells and chemotherapy suppresses metastatic breast cancer
Immunization...
vaccination; antitumor immune response induced by i.t. injection of vector-activated dendritic cells and chemotherapy suppresses metastatic breast cancer
Antitumor agents...
vaccines; antitumor immune response induced by i.t. injection of vector-activated dendritic cells and chemotherapy suppresses metastatic breast cancer
CAS REGISTRY NUMBERS:
2022-85-7 9025-05-2 antitumor immune response induced by i.t. injection of vector-activated dendritic cells and chemotherapy suppresses metastatic breast cancer

4/7/12 (Item 5 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)

142054366 CA: 142(4)54366t JOURNAL

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  Multistep process through which adenoviral vector vaccine overcomes
  anergy to tumor-associated antigens
  AUTHOR(S): Tang, Yucheng; Zhang, Lixin; Yuan, Jing; Akbulut, Hakan;
Maynard, Jonathan; Linton, Phyllis-Jean; Deisseroth, Albert
  LOCATION: Sidney Kimmel Cancer Center, San Diego, CA, USA
  JOURNAL: Blood (Blood)  DATE: 2004  VOLUME: 104  NUMBER: 9  PAGES:
2704-2713  CODEN: BLOOAW  ISSN: 0006-4971  LANGUAGE: English  PUBLISHER:
American Society of Hematology
  SECTION:
    CA215002 Immunochemistry
    CA214XXX Mammalian Pathological Biochemistry
  IDENTIFIERS: vaccine tumor antigen MUC1 mucin transcription factor E7
    CCR7
  DESCRIPTORS:
Adenoviral vectors... Tumor antigens... Dendritic cell... Cytotoxicity...
Human...
    adenoviral vector mediated tumor antigen in anticancer vaccine
Glycoproteins...
    CD40-L (antigen CD40 ligand); adenoviral vector mediated tumor antigen
    in anticancer vaccine
Proteins...
    E7; adenoviral vector mediated tumor antigen in anticancer vaccine
Mucins...
    MUC1; adenoviral vector mediated tumor antigen in anticancer vaccine
Vaccines...
    tumor; adenoviral vector mediated tumor antigen in anticancer vaccine
Antitumor agents...
    vaccines; adenoviral vector mediated tumor antigen in anticancer
    vaccine
? s (cd40L or cd40(w)ligand or cd154)(20n)(vector)(20n)(extracellular)20n)(antigen?
or vaccin? or immunogen?)
>>>Unmatched parentheses
? s (cd40L or cd40(w)ligand or
cd154)(20n)(vector)(20n)(extracellular)(20n)(antigen? or vaccin? or immunogen?)
          10900  CD40L
          45507  CD40
         694162  LIGAND
          21056  CD40(W)LIGAND
           4839  CD154
         529270  VECTOR
         800657  EXTRACELLULAR
        2549518  ANTIGEN?
         770076  VACCIN?
         178569  IMMUNOGEN?
      S5       6  (CD40L OR CD40(W)LIGAND OR
                  CD154)(20N)(VECTOR)(20N)(EXTRACELLULAR)(20N)(ANTIGEN? OR
                  VACCIN? OR IMMUNOGEN?)
? rd s5
      S6       6  RD S5  (unique items)
? t s6/7/all

 6/7/1     (Item 1 from file: 5)
DIALOG(R)File   5:Biosis Previews(R)
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0020919266   BIOSIS NO.: 200900259600
Vector Prime-Protein Boost Vaccine induces 20 Fold Decrease in the Levels
  of CD44(+)CD24(-/Low) Cancer Stem Cells in Epithelial Neoplasms
AUTHOR: Tang Yucheng (Reprint); Akbulut Hakan; Maynard Jonathan; Li
  Pingchaun; Deisseroth Albert B
AUTHOR ADDRESS: Sidney Kimmel Canc Ctr, San Diego, CA USA**USA
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JOURNAL: Blood 112 (11): p1000 NOV 16 2008 2008
CONFERENCE/MEETING: 50th Annual Meeting of the American-Society-of-Hematology San Francisco, CA, USA December 06 -09, 2008; 20081206
SPONSOR: Amer Soc Hematol
ISSN: 0006-4971
DOCUMENT TYPE: Meeting; Meeting Poster
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Since a significant portion (30%) of individuals diagnosed with epithelial neoplasms have highly chemotherapy resistant CD44(+)CD24(-/Low) cancer stem cells in the peripheral blood as well as in solid tumor nodules at diagnosis, we have been developing methods of cancer treatment which depend on methods of killing the cancer stem cells which depend on mechanisms other than chemotherapy for treatment. ***Vaccination*** has been one of these approaches. Unfortunately, it has been known for a long time that the immune response is diminished in older individuals due to decreased numbers of CD4 and CD8 T cells and due to acquisition of functional defects in CD4 cells. An example is the diminished expression of the CD40L in activated CD4 T cells in older individuals which limits the cellular and humoral response to ***vaccines*** in the older age groups. The presence of the ***CD40L*** on the CD4 helper T cells is important for vaccine induced expansion of ***antigen*** specific T cells and B cells. In order to overcome these problems, we have developed an Ad-sig-TAA/ecdCD40L ***vector*** prime-TAA/ecdCD40L protein boost ***vaccine*** strategy. The Ad-sig-TAA/ecdCD40L carries a transcription unit encoding the extracellular domain Iced) of the CD40 ligand (***CD40L***) linked to tumor associated ***antigen*** (TAA). The TAA are in turn linked to a secretory signal peptide (sig) so that the TAA/ecdCD40L protein will be secreted from the vector infected cells at the injection site of the vector continuously over a 10-14 day period. The ***CD40L*** targets the TAA to the DCs, activates the DCs, and carries the TAA into the DC so that the TAA fragments are presented on Class I MHC. The sc injection of the TAA/ecdCD40L protein booster following the sc administration of the Ad-sig-TAA/ecdCD40L (we call this the TAA/ecdCD40L VPP vaccine) induces complete regressions of pre-existing tumor even in aged mice (18 months old). We then chose human MUC-1 as the TAA for testing the efficacy of our vaccine platform for cancer stem cells. Over 90% of the late stage patients with cancers of the breast, ovary, prostate, and lung have been reported to overexpress a hypoglycosylated form of MUC-1 which correlates with decreased time to progression. The hypoglycosylation on MUC-1 in cancer cells creates a tumor specific target for vaccines. Kufe's lab has shown that overexpression of MUC-1 in the cancer cell promotes resistance to therapy by reducing p53 (Cancer Cell 7: 167, 2005) and induces proliferation by activation of the NFkappaB (Nature Cell Biology 9: 1419, 2007). Finn's lab has shown that MUC-1 is a marker present on >90% of the "tumor stem cell" population as well as the more mature cells in breast cancer (Ca Res 68: 2419, 2008). In order to test the efficacy of the hMUC-1/ecdCD40L V-PP vaccine on tumor stem cells, we first isolated hMUC-1 positive Lewis Lung carcinoma cells by stably transfecting the hMUC-1 cDNA into these cells. We showed that the Ad-sig-hMUC-1/ecdCD40L vector prime-hMUC-1/ecdCD40L protein boost vaccine overcomes anergy to hMUC-1 antigen (hMUC-1) in hMUC-1. Tg mice. We then injected 100,000 human MUC-1 positive Lewis Lung mouse carcinoma cells (LL2/LL1hMUC-1) mouse cancer cells into the syngeneic C57BL/6J mice. ELISPOT assay showed that the hMUC-1/ecdCD40L VPP vaccine increased the level of antigen specific CD8 effector cells in the lymph node draining the site of injection of the tumor to 900 hMUC-1 specific CD8 T cells/1 00,000 total

cells and to 325 hMUC-1 specific CD8 T cells/100, 000 cells in the spleen.The level of cytotoxicity of spleen cells increased 6 fold folowing vaccination (spleen cells from control and vaccinated mice were exposed in vitro to mitomycin C treated hMUC positive LL2/LL1hMUC-1 cells for 5 days before testing). Measurement of the growth of the sc tumor nodule at the sc injection site showed a 20 fold decrease in the total size of the tumor in the vaccinated vs the control mice and the size of the tumor was decreasing in the vaccinated mice vs the control group at the time of sacrifice at 24 days. Finally, the tumor nodule from the vaccinated and unvaccinated mice were excised post mortem, minced, treated with collagenase and DNAse I and strained through gauze. FACS analysis showed that in the vaccinated mice, the number of the MUC-1 positive tumor stem cells with the CD44(+)CD24(-) immunophenotype decreased over 20 fold during the treatment period. These results suggest that the hMUC-1/ecdCD40L VPP vaccine could suppress the levels of hMUC-1 cancer stem cells in pre-existing tumor nodules. This vaccine platform has entered clinical phase I testing.

6/7/2 (Item 2 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0020916731 BIOSIS NO.: 200900257065
TAA/ecdCD40L VPP Vaccination Induces Robust Adaptive Immune Response Even in Individuals with Post Transplantation Lymphopenia
AUTHOR: Tang Yucheng (Reprint); Park Yeon Hee; Maynard Jonathan; Li Pingchuan; Akbulut Hakan; Petersen Line; Deisseroth Albert B
AUTHOR ADDRESS: Sidney Kimmel Canc Ctr, San Diego, CA USA**USA
JOURNAL: Blood 112 (11): p141-142 NOV 16 2008 2008
CONFERENCE/MEETING: 50th Annual Meeting of the American-Society-of-Hematology San Francisco, CA, USA December 06 -09, 2008; 20081206
SPONSOR: Amer Soc Hematol
ISSN: 0006-4971
DOCUMENT TYPE: Meeting; Meeting Abstract
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Individuals of advanced chronological age exhibit an impaired immune response to ***vaccines*** . This may be due to a reduction in the ratio of antigen naive/memory CD4 and CD8 T cells and acquisition of functional defects in activated "helper" CD4 T cells (eg diminished CD40 ***ligand*** (***CD40L***) expression) during the aging process. The absence of the CD40L on activated CD4 helper T cells reduces the magnitude of expansion of antigen specific T and B cells induced by ***vaccination*** . In order to circumvent this defective response to vaccines among individuals in the fifth and sixth decades of life, our laboratory has developed an adenoviral vector (Ad-sig-TAA/ecdCD40L) vaccine which is designed to overcome the absence of CD40L expression in activated CD4 helper T cells in older individuals. The subcutaneous (sc) injection of this ***vector*** leads to the release of a fusion protein composed of a TAA linked to the extracellular domain (ecd) of the CD40L, which binds to the CD40 receptor on DCs, activates the DCs, and leads to the presentation of TAA fragments on Class I MHC. Two sc injections of the TAA/ecdCD40L protein as a booster following the sc administration of the Ad-sig-TAA/ecdCD40L vector (we call this the TAA/ecdCD40L VPP vaccine) expands the magnitude of the cellular and Immoral immune response induced by the vector in 18 month old aged mice as well as in younger mice. In order to explore ways of further amplifying the immune

response induced by this ***vaccine*** . we decided to test the feasibility of using this vaccine following treatments which reduce the number of T cells in the body of the test subject. We hypothesized that during states of chemotherapy or radiation induced lymphopenia, the number of negative regulatory CD4CD25FoxP3 T cells would be reduced, and all of the regulatory signals in the T cell compartment would be promoting expansion of T cells. thus creating an ideal state for vaccination. To test this hypothesis, we injected 100,000 cells from an established neoplastic cell line sc. Three days later, we administered myeloablative doses of total body irradiation (TBI) followed by a T cell depleted syngencic bone marrow transplant (TCDBMT) to reconstitute neutrophil and platelet production. Three days following the TBI and TCDBMT. we intravenously infused donor lymphocytes (DLI) from a TAA/ecdCD40L VPP vaccinated syngeneic donor. Four weeks later. we vaccinated the recipient mouse further with TAA/ccdCD40L sc injections. We tested this for a TAA composed of a junctional peptide from the p210Bcr-Abl protein of chronic myelogenous leukemia (CML) and for the E7 protein of the human papilloma virus (HPV). We found that in the case of the BcrAbl/ecdCD40L VPP vaccine, 50% of the mice treated with TBI, TCDBMT, ten million lymphocytes (DLI) from BcrAbl/ecdCD40L VPP vaccinated syngeneic donors followed in 4 weeks by 3 BcrAbl/ecdCD40L protein sc injections of the recipient test mouse, developed a complete response with the vaccination and that these mice remained disease free beyond 250 days after injection of the P210Bcr-Abl positive 32D leukemia cells, whereas C56BL/6J test mice treated with TBI and TCDBMT without DLI from vaccinated donors nor sc BcrAbl/ecdCD40L sc booster vaccination following injection with the p210Bcr-AbI positive 32D myeloid leukemia cell line all died by day 32. Mice treated with TBI. TCDBMT, DLI from unvaccinated donors followed by vaccination of the recipient with 3 sc BcrAbl/ecdCD40L protein injections exhibited a degree of leukemia suppression that was equal to mice receiving TBI.TCDBMT, DLI from a BcrAbl/ecdCD40LVPP vaccinated donor and BcrAbl/ecdCD40L vaccination. To test the effect of the TAA/ecdCD40L VPP vaccine against an antigen associated with an epithelial neoplasm, we injected 100,000 E7 positive TC-1 mouse cancer cells into syngeneic C57BL6J mice followed in 3-5 days by myeloablative doses of TBI and engrafting doses of TCDBMT. Three days later. the mice received 10 million spleen cells from syngeneic donor mice previously vaccinated with the E7/ecdCD40L VPP vaccine. Finally, 4 weeks later, the test mice received sc E7/ecdCD40L protein booster injections. The vaccinated mice achieved much greater degrees of tumor suppression than was seen following TBI and TCDBMT without DLI from vaccinated donors. These studies show that it is possible to induce a robust adaptive immune response by vaccination with the TAA/ecdCD40L VPP vaccine even in severely lymphopenic individuals.

6/7/3 (Item 3 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

18788546 BIOSIS NO.: 200600133941
Vector prime-protein boost vaccine induces immune response against "self-antigens" associated with epithelial neoplasms and tumor vascular endothelial cells.
AUTHOR: Tang Yucheng (Reprint); Maynard Jonathan; Akbulut Hakan; Linton Phyllis-Jean; Deisseroth Albert B
AUTHOR ADDRESS: Sidney Kimmel Canc Ctr, Gene Therapy Program, San Diego, CA USA**USA
JOURNAL: Blood 106 (11, Part 2): p471B-472B NOV 16 2005 2005
CONFERENCE/MEETING: 47th Annual Meeting of the American-Society-of-Hematology Atlanta, GA, USA December 10 -13, 2005;

20051210
SPONSOR: Amer Soc Hematol
ISSN: 0006-4971
DOCUMENT TYPE: Meeting; Meeting Abstract
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: In order to develop a method to overcome the immune tolerance of cancer, we have designed an Ad-sig-TAA/ecdCD40L adenoviral vector vaccine for the in vivo activation and tumor antigen loading of dendritic cells (DCs). Subcutaneous (sc) injection of the Ad-sig-TAA/ecdCD40L adenoviral vector results in the secretion for 10 days from the vector infected cells of a fusion protein composed of a fragment of a tumor associated antigen (TAA) fused to the extracellular domain (ecd) of the CD40 ligand (***CD40L***). ***CD40L*** is a homotrimeric protein normally found on B cells and helper CD4(+)T cell lymphocytes. All of the sequences necessary to stabilize this trimeric structure of the protein are contained within the ecd of the CD40L protein. The binding of the TAA/ecdCD40L protein to DCs induces migration of these DCs to the regional lymph nodes. These DCs carry fragments of TAA bound to surface MHC Class I molecules. We have shown that the Ad-sig-TAA/ecdCD40L vector strategy can induce a cellular and humoral immune that persists for over a year indicating that a durable memory response is generated. We showed that sc injections of the Ad-sig-rH2N/ecdCD40L vector in rH2N.Tg mice induces a cellular and humoral immune response against the rat Her-2-Neu (rH2N) antigen which is associated with breast cancer. We showed that the sc injection of the Ad-sig-rH2N/ecdCD40L adenoviral vector in a rH2N.Tg transgenic mouse induced resistance to the growth of rH2N positive cancer cells in mice previously anergic to the rH2N antigen. We demonstrated that the sc injection of the Ad-sig-hMUC-1/ecdCD40L vector suppressed the growth of tumor cells positive for the human MUC-1 (hMUC-1) antigen in hMUC-1. Tg mice which were previously anergic to the hMUC-1 antigen. The sc injection of the Ad-sig-hMUC-1/ecdCD40L vector followed by sc injection of two booster injections of the hMUC-1/ecdCD40L protein induced high levels of hMUC-1 specific turner infiltrating effector CD8 positive T cells and hMUC-1 antibodies which bound to human breast and prostate cancer cells. In addition, we recently showed that the Ad-sig-TAA/ecdCD40L strategy could be used to activate a cellular and Immoral immune response against Annexin A1 (AnxA1), which is a marker uniquely displayed on the luminal membrane of tumor vascular endothelial cells but not on the luminal membrane of vascular endothelial cells of normal tissue. The subcutaneous injection of the Ad-sig-AnxA1/ecdCD40L vector suppressed the growth of AnxAl negative tumor cells in a syngeneic mouse tumor model. This vector prime/protein boost vaccination was found to induce increased levels of effector CD8 positive T cells in the target tumor. These effector T cells were shown express increased levels of the genes encoding the CCR5 chemokine receptor and the CCL3 chemokine ligand which promote the infiltration of antigen specific effector T cells in the target tumor tissues. The response to cancer vaccines is often reduced in older individuals in part due to an intrinsic functional defect in CD4 cells. The Ad-sig-TAA/ecdCD40L vaccine may circumvent this defect because we have shown that the induction of the immune response is CD4 independent. These data suggest that this vector prime-protein boost vaccination strategy will be useful in the reduction of the frequency of recurrence following initial therapy for a wide variety of neoplastic diseases.

17781412 BIOSIS NO.: 200400148073
An adenoviral vector cancer vaccine that delivers a tumor associated antigen/CD40-ligand fusion protein to dendritic cells in vivo and thereby breaks tolerance to tumor associated self antigens.
AUTHOR: Tang Yucheng (Reprint); Zhang Lixin (Reprint); Akbulut Hakan (Reprint); Litton Phyllis-Jean (Reprint); Deisseroth Albert B (Reprint)
AUTHOR ADDRESS: Genetic Therapy Program, Sidney Kimmel Cancer Center, San Diego, CA, USA**USA
JOURNAL: Blood 102 (11): p745a November 16, 2003 2003
MEDIUM: print
CONFERENCE/MEETING: 45th Annual Meeting of the American Society of Hematology San Diego, CA, USA December 06-09, 2003; 20031206
SPONSOR: American Society of Hematology
ISSN: 0006-4971
DOCUMENT TYPE: Meeting; Meeting Poster; Meeting Abstract
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Our laboratory has developed an in vivo vector based method of activating and tumor antigen loading dendritic cells (DCs) for 10 days continuously to generate a T cell dependent systemic immune response against self ***antigens*** associated with cancer cells. We have shown that the subcutaneous injection of this vector is capable of breaking the tolerance of the immune response to the self antigens of the cancer cells. This adenoviral ***vector*** (Ad), designated Ad-sig-TAA/ecdCD40L, carries a transcription unit encoding the extracellular domain (ecd) of the CD40 ligand (CD40L) linked to tumor associated antigens (TAA), either the self antigen MUC-1 or the foreign viral antigen HPV E7 that were in turn linked to a secretory signal peptide (sig). The TAA/ecdCD40L protein is secreted from the infected cells at the injection site of the ***vector*** continuously over a 10-14 day period. We showed that the TAA/ecdCD40L protein binds to DCs near the injection site which then migrate to regional lymph nodes where they activate a CD8+ T cell systemic immune response against TAA positive tumor cells. The first vector studied (Ad-sig-E7/ecdCD40L) carried a transcription unit encoding the ecd of the CD40L linked to E7, that was in turn linked to a secretory signal peptide (sig). ELISPOT, tetramer staining and cytotoxicity assays all showed that subcutaneous injection of the Ad-sig-E7/ecdCD40L vector can increase the level of antigen specific cytotoxic lymphocytes (CTLs) by eliciting a Th-1 response E7 positive TC-1 tumor cells. The subcutaneous injection of Ad-sig-E7/ecdCD40L prevents engraftment of at least 5X105 TC-1 cells in the vector injected animals for up to 12 months. We also demonstrated that the immunization with Ad-sig-E7/ecdCD40L vector leads to the induction of a far more robust TAA-specific CD8+ T cell response than vaccinations with the non-secretable TAA-CD40L transcription unit or the TAA transcription unit or the CD40L transcription unit alone. The second vector studied (Ad-sig-hMUC-1/ecdCD40L) carried a human MUC-1 (hMUC-1)/ecdCD40L transcription unit. The subcutaneous injection of this vector into hMUC-1 transgenic (hMUC-1.Tg) mice, which are anergic to hMUC-1, resulted in the induction of a hMUC-1 specific immune response, which could suppress the growth of the hMUC-1 mouse cancer cells. We were able to show that the level of hMUC-1 specific CD8+ T cells increases in the spleen of the mice vaccinated with the Ad-sig-hMUC-1/ecdCD40L vector. These hMUC-1 specific cytotoxic lymphocytes demonstrated cytolytic activity, the ability to produce interferon gamma, and the ability to proliferate following exposure to the hMUC-1 antigen positive cells. The Ad-sig-hMUC-1/ecdCD40L vector injections induced an antigen specific T

cell immune response against cancer cells positive for the hMUC-1 antigen in MUC-1.Tg mice which are anergic to the hMUC-1 antigen. No other cytokine or immune enhancing treatments were required to induce the T cell immune response to the hMUC-1 positive cancer cells in 100% of the mice tested. These findings suggest that vaccination with the Ad-sig-TAA-ecdCD40L vector can break tolerance to human MUC-1 positive tumor cells in transgenic mice which are anergic to this antigen. Thus, this vector may be of use for the in vivo immunotherapy of the many neoplasms that over-express the MUC-1 self antigen.

6/7/5 (Item 1 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)

146044177 CA: 146(3)44177a PATENT
Methods for immunotherapy of cancer using an expression vector encoding a tumor vasculature antigen (TVECA)-CD40L fusion and/or a tumor antigen vaccine
INVENTOR(AUTHOR): Tang, Yucheng; Deisseroth, Albert
LOCATION: USA
ASSIGNEE: Sidney Kimmel Cancer Center
PATENT: PCT International ; WO 2006130525 A2 DATE: 20061207
APPLICATION: WO 2006US20652 (20060526) *US 2005PV686534 (20050531) *US 2006PV795686 (20060428)
PAGES: 80pp. CODEN: PIXXD2 LANGUAGE: English
PATENT CLASSIFICATIONS:
CLASS: A61K-000/A
DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BW; BY; BZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; EG; ES; FI; GB; GD; GE; GH; GM; HR; HU; ID; IL; IN; IS; JP; KE; KG; KM; KN; KP; KR; KZ; LC; LK; LR; LS; LT; LU; LV; LY; MA; MD; MG; MK; MN; MW; MX; MZ; NA; NG; NI; NO; NZ; OM; PG; PH; PL; PT; RO; RU; SC; SD; SE; SG; SK; SL; SM; SY; TJ; TM; TN; TR; TT; TZ; UA; UG; US; UZ; VC; VN; YU; ZA DESIGNATED REGIONAL: AT; BE; BG; CH ; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IS; IT; LT; LU; LV; MC; NL; PL; PT; RO; SE; SI; SK; TR; BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML; MR; NE; SN; TD; TG; BW; GH; GM; KE; LS; MW; MZ; NA; SD; SL; SZ; TZ; UG; ZM; ZW; AM; AZ; BY; KG; KZ; MD; RU; TJ; TM
SECTION:
CA215002 Immunochemistry
CA201XXX Pharmacology
CA203XXX Biochemical Genetics
IDENTIFIERS: cancer vaccine expression vector tumor antigen, tumor vasculature antigen TVECA CD40 ligand fusion anticancer immunotherapy
DESCRIPTORS:
Immunostimulants...
adjuvants, fusion protein administered with; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Immunization...
against cancer; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Antibodies and Immunoglobulins...
against TVECA, generation of; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Antigens...
autoantigens; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine

Glycoproteins...
CD40-L (antigen CD40 ligand), fusion with TVECA; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Peptides,biological studies...
compds., linker, between TVECA and CD40 ligand; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Protein motifs...
cytoplasmic domain, CD40L lacking; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
CD8-positive T cell...
cytotoxic, against TVECA, generation of; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
T cell(lymphocyte)...
cytotoxic, CD8+, against TVECA, generation of; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Proteins...
endosialin, (tumor endothelial marker 1; Tem1), as TVECA, fusion with CD40 ligand; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion a
Blood vessel...
endothelium, tumor, antigen specifically associated with; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Promoter(genetic element)...
enhancer, from human cytomegalovirus; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Protein motifs...
extracellular domain, of mucin MUC1, in tumor antigen vaccine; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen
Proteins...
E7, from HPV, in tumor antigen vaccine; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
neu(receptor)...
HER-2, in tumor antigen vaccine; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Annexins...
I, as TVECA, fusion with CD40 ligand; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Mucins...
in tumor antigen vaccine; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Virus replication...
in tumor cells, vector rendered non-replicating in normal human cells; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor
Drug delivery systems...
injections, s.c.; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Peptides,biological studies...

linker, between TVECA and CD40 ligand; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Immunotherapy... Neoplasm... Antitumor agents... Genetic vectors... Gene therapy... Human... Viral vectors... Adenoviral vectors... Molecular cloning... Epitopes...
methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Mucins...
MUC1, in tumor antigen vaccine; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Mucins...
MUC12, in tumor antigen vaccine; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Mucins...
MUC13, in tumor antigen vaccine; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Mucins...
MUC15, in tumor antigen vaccine; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Mucins...
MUC16, in tumor antigen vaccine; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Mucins...
MUC2, in tumor antigen vaccine; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Mucins...
MUC3, A, in tumor antigen vaccine; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Mucins...
MUC3, B, in tumor antigen vaccine; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Mucins...
MUC4, in tumor antigen vaccine; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Mucins...
MUC5, in tumor antigen vaccine; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Mucins...
MUC5, MUCMB, in tumor antigen vaccine; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Mucins...
MUC6, in tumor antigen vaccine; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Mucins...
MUC7, in tumor antigen vaccine; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine

Mucins...
MUC8, in tumor antigen vaccine; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Mucins...
MUC9, in tumor antigen vaccine; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Epithelium...
neoplasm, tumor antigen from; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Angiogenesis...
neovascularization, tumor targeting via; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Human herpesvirus 5...
promoter/enhancer from; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Secretion(process)...
protein, of fusion protein; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Signal peptides...
secretory; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Repeat motifs(protein)...
tandem, of mucin, in tumor antigen vaccine; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Tyrosine kinase receptors...
Tie-2, as TVECA, fusion with CD40 ligand; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Protein motifs...
transmembrane domain, CD40L including no more than six residues from either end of, or CD40L lacking; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TV
Human papillomavirus...
tumor antigen is E7 protein of; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Vaccines...
tumor; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Antigens...
TVECA (tumor vascular endothelial cell antigen), fusion with CD40 ligand; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tum
Chimeric gene...
TVECA-CD40L, vector comprising; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Fusion proteins(chimeric proteins)...
TVECA-CD40L, vector encoding; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Vascular endothelial growth factor receptors...

type VEGFR-1, as TVECA, fusion with CD40 ligand; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Tumor antigens...
vaccine; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Antitumor agents...
vaccines; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Endothelium...
vascular, tumor, antigen specifically associated with; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
Annexins...
VIII, as TVECA, fusion with CD40 ligand; methods for immunotherapy of cancer using expression vector encoding tumor vasculature antigen (TVECA)-CD40L fusion and/or tumor antigen vaccine
CAS REGISTRY NUMBERS:
916351-06-9 916351-08-1 unclaimed nucleotide sequence; methods for immunotherapy of cancer using an expression vector encoding a tumor vasculature antigen (TVECA)-CD40L fusion and/or a tumor antigen vaccine
916351-07-0 916351-09-2 unclaimed protein sequence; methods for immunotherapy of cancer using an expression vector encoding a tumor vasculature antigen (TVECA)-CD40L fusion and/or a tumor antigen vaccine
916351-10-5 916335-63-2 916335-64-3 916335-65-4 916351-11-6
916335-66-5 916335-67-6 129437-45-2 853356-32-8 565468-47-5
135824-91-8 511228-33-4 207690-17-3 565468-52-2 565468-53-3
916335-68-7 350810-65-0 916351-12-7 916351-13-8 916351-14-9
916351-15-0 916351-16-1 916351-17-2 916351-18-3 853356-30-6
916351-19-4 916351-20-7 916351-21-8 916351-22-9 916351-23-0
916351-24-1 916351-25-2 916351-26-3 916351-27-4 916351-28-5
916351-29-6 853356-31-7 404594-06-5 916351-30-9 916351-31-0
916351-32-1 916351-33-2 205041-14-1 916351-34-3 916351-35-4
916351-36-5 916351-37-6 916351-38-7 916351-39-8 916351-40-1
916351-41-2 916351-42-3 916351-43-4 916351-44-5 916351-45-6
916351-46-7 916351-47-8 916351-48-9 916351-49-0 160212-35-1
856768-14-4 856768-15-5 916351-50-3 916351-51-4 916351-52-5
916351-53-6 916351-54-7 916351-55-8 916351-56-9 916351-57-0
916351-58-1 916351-59-2 916351-60-5 unclaimed sequence; methods for immunotherapy of cancer using an expression vector encoding a tumor vasculature antigen (TVECA)-CD40L fusion and/or a tumor antigen vaccine

6/7/6 (Item 2 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)

145416537 CA: 145(21)416537c JOURNAL
Vector Prime/Protein Boost Vaccine That Overcomes Defects Acquired during Aging and Cancer
AUTHOR(S): Tang, Yucheng; Akbulut, Hakan; Maynard, Jonathan; Petersen, Line; Fang, Xiangming; Zhang, Wei-Wei; Xia, Xiaoqin; Koziol, James; Linton, Phyllis-Jean; Deisseroth, Albert
LOCATION: Sidney Kimmel Cancer Center, San Diego, CA, 92121, USA
JOURNAL: J. Immunol. (Journal of Immunology) DATE: 2006 VOLUME: 177 NUMBER: 8 PAGES: 5697-5707 CODEN: JOIMA3 ISSN: 0022-1767 LANGUAGE: English PUBLISHER: American Association of Immunologists
SECTION:
CA215002 Immunochemistry

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    CA214XXX Mammalian Pathological Biochemistry
  IDENTIFIERS: immunization breast cancer vaccine aging mucin CD40 ligand
  DESCRIPTORS:
Glycoproteins...
    CD40-L (antigen CD40 ligand), extracellular domain, fusion product with
    tumor associated antigen; vector prime/protein boost vaccine that
    overcomes defects acquired during aging and cancer
T cell(lymphocyte)...
    cytotoxic; vector prime/protein boost vaccine that overcomes defects
    acquired during aging and cancer
Dendritic cell...
    fusion product with extracellular domain of CD40 ligand; vector
    prime/protein boost vaccine that overcomes defects acquired during
    aging and cancer
Annexins...
    I; vector prime/protein boost vaccine that overcomes defects acquired
    during aging and cancer
Mucins...
    MUC1, fusion product with extracellular domain of CD40 ligand; vector
    prime/protein boost vaccine that overcomes defects acquired during
    aging and cancer
Vaccines...
    tumor; vector prime/protein boost vaccine that overcomes defects
    acquired during aging and cancer
Antitumor agents...
    vaccines; vector prime/protein boost vaccine that overcomes defects
    acquired during aging and cancer
Aging,animal... Antibodies and Immunoglobulins... CD8-positive T cell...
Human... Immunization... Mammary gland,neoplasm... Tumor antigens...
    vector prime/protein boost vaccine that overcomes defects acquired
    during aging and cancer
? ds

Set     Items   Description
S1        594   E1-E16
S2        376   E2-E11
S3         16   (S1 OR S2) AND (CD40L OR CD40(W)LIGAND OR CD154)(20N)(VECT-
                  OR)
S4         13   RD S3  (unique items)
S5          6   (CD40L OR CD40(W)LIGAND OR CD154)(20N)(VECTOR)(20N)(EXTRAC-
                 ELLULAR)(20N)(ANTIGEN? OR VACCIN? OR IMMUNOGEN?)
S6          6   RD S5  (unique items)
?
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